

REMARKS

In the Office Action, claims 1-8 and 10, of the above captioned application, stand rejected. Claims 9 and 11 stand withdrawn from consideration. Claim 3 is amended and claims 1-2 and 4-11 are canceled. Thus, claim 3 is the sole remaining claim pending in the application. Support for the amendments may be found in the originally filed specification, claims, and figures. No new matter has been introduced by these amendments. Reconsideration of this application is respectfully requested.

In the Office Action dated February 4, 2003, the Examiner stated that in a telephone conversation with Damon L. Boyd on January 13, 2003, a provisional election was made with traverse to prosecute the invention of Group 1, claims 1-8 and 10. Applicants affirm this election.

Additionally, preliminarily, Applicants note the Examiner has rejected various of claims 1-8 and 10 under 35 U.S.C. §§ 102, 103 and/or 112. As set forth below, Applicants respectfully disagree and traverse the rejections, however, with respect to claims 1-2 and 4-11, these claims have been canceled without prejudice, thus mooting all rejections with respect to those claims. Accordingly, Applicants respectfully request the rejections of these claims to be withdrawn.

Rejections Under 35 U.S.C. §112

In the Office Action, the Examiner objected to claims 2-8 and 10 because the term “polyethylene” was misspelled in claims 2 and 3. Applicants have made appropriate correction to the spelling of this word in the only remaining claim, claim 3. In addition, the Examiner rejected claim 10 for lack of antecedent basis. As mentioned above, in light of the cancellation of claim 10, this rejection is moot. Accordingly, Applicants request withdrawal of the rejections.

Rejections Under 35 U.S.C. §§102 and 103

Preliminarily, in the Office Action, various of the claims stand rejected under 35 U.S.C. §§102 and 103 as being anticipated or rendered obvious in light of the cited references Jones, Obermayer, Seidenberg, Kono and/or Wirt. The Office Action alleges that all of the limitations of the claims are either inherently or explicitly disclosed by the references, alone or in combination. However, as noted above, claims 1-2 and 4-11 have been canceled, thus mooting the rejections to those claims.

Additionally, as mentioned above, the only remaining claim is amended claim 3 and as described below, Applicants submit that none of the cited references, alone or in combination, teach, suggest, motivate or otherwise disclose the limitations found in amended claim 3. The bases for the Examiner's rejections and Applicants' response follows.¹

Jones

Claim 1 stands rejected under 35 U.S.C. §102(b) as being anticipated by Jones, U.S. Patent No. 4,285,754 ("Jones"). The Examiner contends that Jones discloses a wick material for use in connection with an air freshener comprising a porous material having a pore size less than 250 microns and a void volume of 20% to 50% where the transfer rate is about 20 mg/hr.

However, Applicants note that Jones only discloses a pore size ranging from 50-100 micrometers and a transfer rate of 4-20 mg/hr. Col. 5, ll. 36-37; and Col. 6, ll. 15-17. Moreover, Applicants submit that Jones teaches away from the use of polyethylene as a wick material when it states that polyethylene wicks are less desirable because they do not generally have uniform pore sizes. Col. 2, lines 8-20.

In contrast, amended claim 3 recites a polyethylene wick material having a pore size of 3-30 microns and a transfer rate of 30-70 mg/hr. Thus, Applicants submit that each and every element of claim 3 is not disclosed, taught, or suggested by Jones and accordingly, amended claim 3 would not be anticipated or rendered obvious by Jones.

Obermayer

Claim 1 stands rejected under 35 U.S.C. § 102 (b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 4,356,969 ("Obermayer"). In particular, the Examiner contends that Obermayer teaches a vapor dispenser comprising a cellulosic membrane vapor emitting surface through which the vapor is dispensed from the reservoir to the atmosphere. The Examiner continues stating that the membrane has a pore size of less than 250 Angstroms, thus preventing the leakage of non-vaporized liquid from the membrane surface. The Examiner continues stating that the membrane releases fragrance at a rate of 16.5 mg/hr. The Examiner notes that, while Obermayer fails to teach the void volume of

¹ While many of the Examiner's rejections were asserted only with respect to claims other than claim 3, in the interest of diligence, Applicants include herein the Examiner's summary of each of the references

the membrane, since the pore size and void volume together dictate the controlled rate of release of the vaporized material in the liquid dispenser, and because the pore size of the Obermayer membrane and the controlled rate of release of the vaporized material meets the specific range set forth in the claim, the Examiner takes the position that the void volume of the membrane would be inherently present.

First, Applicants submit that Obermayer discloses an air-freshener pad, as opposed to a wick. The pad is configured as a membrane having pores. The Obermayer air freshener discloses the addition of a gel to volatile fragrance liquids to prevent leakage. Col. 3, lines 5-64. Obermayer also discloses the use of “very small pores; for example, from 10^{-3} microns to 10^{-1} microns diameter,” Col. 4, lines 63-65. Again, Obermayer discloses pore sizes on the order of 5 Angstroms to about 400 Angstroms; i.e., 0.0001 microns to 0.04 microns. Col. 6, lines 57-60; and Col. 9, lines 41-43.

Moreover, Obermayer teaches away from the use of pore sizes from .1 microns to 10 microns stating that these ranges “can be used but are not preferred because they may lead to some leakage of liquid through the” membrane. Col. 4, lines 66-68. That is, notably, there is an explicit teaching by Obermayer that the pore sizes should be several orders of magnitude smaller than 3 to 30 microns in order to obtain the non-leak characteristics of claim 3. In addition, Obermayer further discloses a transfer rate of 16.5 – 17.2 mg/hr. Col. 12, lines 11-30.

In contrast, as noted above, amended claim 3 recites, a polyethylene wick “having an average pore size in the range of from about 3 to 30 microns.” This recited range is clearly not disclosed in Obermayer. Furthermore, amended claim 3 recites a transfer rate “of about 30-70 mg/hr.” This recited range is clearly not disclosed in Obermayer. Thus, Applicants submit that each and every element of claim 3 is not disclosed, taught, or suggested by Obermayer and accordingly, amended claim 3 would not anticipated or rendered obvious by Obermayer.

Seidenberg

Claim 1 stands rejected under 35 U.S.C. § 102 (b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 4,765,396 (“Seidenberg”). In particular, the Examiner contends that Seidenberg teaches a wick for use in a heat pipe

(and the claims rejected based on the references) to illustrate that amended claim 3 recites limitations not found in any of the cited references.

comprising an open-cell, ultra high molecular weight polyethylene foam that has an average pore size of about 10-12 microns and a void volume of 40%. The Examiner takes the position that since Seidenberg is using the same porous wick as claimed and because the wick material meets all the requirements of the claim, the functional performance of the porous wick would be inherently present. The Examiner continues stating that it would seem from the claim that if one meets the structure recited, the properties must be met.

The Examiner also notes that Seidenberg does not disclose the wick material being a high-density polyethylene, but that U.S. Patent No. 5,853,633 ("Kono") does teach said material and that it would be obvious to use high-density polyethylene in Seidenberg in view of Kono. Kono discloses a microporous thermoplastic resin membrane having uniform microspheres.

Applicants submit that Kono does not disclose a wick having a void volume ratio of 30-35%, an average pore size, leak prevention or transfer rates. Applicants submit that there is no teaching, motivation or suggestion to combine Kono with Seidenberg, and that moreover, the resulting combination still does not result in a wick having a (1) void volume ratio of 30% to 35%, (2) a vaporizable material to be transported by the wick material does not leak from the wick material when the wick material is inverted, and (3) a transfer rate of said vaporizable material at about 30-70 mg per hour, as recited by amended claim 3.

Accordingly, Applicants submit that each and every element of amended claim 3 is not disclosed, taught, or suggested by Seidenberg or Kono, alone or in combination and thus, amended claim 3 is not anticipated or rendered obvious by Seidenberg and/or Kono. Applicants therefore request any rejection be withdrawn.

Wirt

Claims 4-8 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 4,925,327 ("Wirt"). In particular, the Examiner contends that Wirt teaches a wick for use in a liquid applicator comprising a porous metering of high-density polyethylene that has an average pore size of about 60 to 100 microns and a void volume of 40% to 60%. The Examiner again contends that because Wirt is using the same porous material as Applicants and because the porous material meets all the requirements of the claim, the Examiner takes the position that the functional performance of the porous material would be inherently present.

However, Applicants submit that Wirt discloses a sponge for use in a liquid applicator, specifically, a liquid applicator for applying pre-operative surgical scrubs or paints to skin. See Wirt Abstract. Thus, Wirt discloses a sponge which for any given volume, viscosity and surface tension of the liquid to be applied, has an average flow rate of the liquid through a metering insert of between about 0.25 and 10 ml/sec. In fact, this specified liquid flow rate is required by Wirt because a greater flow rate would result in an applicator that drips and a lesser flow rate would “result in an applicator which does not provide adequate liquid for surgical scrub applications.” Col. 5, ll. 40–48. Thus, the sponge of Wirt is configured to transfer liquids in contrast to the wick of the present application which is configured to transfer “a vaporizable material” in vapor form.

In contrast, Wirt does not disclose a transfer rate of about 30 to about 70 mg/hr as recited in amended claim 3. In fact, notably, the transfer rate disclosed in Wirt (10 ml/sec @ at an assumed 1 gm/cm³ equals a liquid transfer rate of approximately 36,000,000 mg per hour) is many orders of magnitude larger than the range recited in claim 3 as Wirt is designed to transfer a liquid to the environment as opposed to a vapor.

Therefore, Applicants submit that each and every element of amended claim 3 is not disclosed, taught, or suggested by Wirt and as such, amended claim 3 is not anticipated or rendered obvious by Wirt.

CONCLUSION

In view of the above remarks and amendments, Applicants respectfully submit that pending claim 3 properly sets forth that which Applicants regard as their invention and is allowable over the cited prior art.

Accordingly, Applicants respectfully request allowance the pending claim. The Examiner is invited to telephone the undersigned at (602) 382-6337 at the Examiner's convenience, if that would help further prosecution of the subject Application. Applicants authorize and respectfully request that any fees due be charged to Deposit Account No. 19-2814.

This statement does NOT authorize charge of the issue fee.

Respectfully submitted,

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